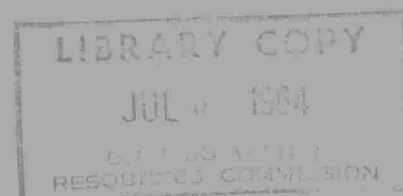




THE
ONTARIO WATER RESOURCES
COMMISSION
REPORT ON
WATER POLLUTION SURVEY
TOWNSHIP OF TOSORONTIO

DIVISION OF SANITARY ENGINEERING

1964



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REPORT ON
WATER POLLUTION SURVEY

OF THE

TOWNSHIP OF TOSORONTIO
COUNTY OF SIMCOE

THE DIVISION OF SANITARY ENGINEERING

1964

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INTRODUCTION

This report is the result of a survey that was made to assess the quality of the water in the streams providing drainage for the Township of Tosorontio.

Surveys of this nature are made routinely and upon request by the Ontario Water Resources Commission, and are designed to locate any existing or potential sources of pollution.

Recommendations are made with reference to pollution abatement and prevention. When water and sewage treatment works appear desirable, the Commission has a programme to aid in the construction and financing of these works.

GENERAL INFORMATION

The Township of Tosorontio, which is situated in the westerly southern section of the County of Simcoe, has a residential population of approximately 1,777, excluding the military personnel stationed at Camp Borden.

Tosorontio is a predominantly rural municipality with part of Camp Borden occupying the north-east section of the township. Tobacco and potatoes are grown on many of the local farms.

The township residents obtain their water supply from private wells. With the exception of the sewage from the Camp Borden reservation, domestic sewage in the remainder of the township is generally disposed of by means of private septic tank

systems. The domestic sewage originating from Camp Borden is treated at two plants located in the Township of Essa.

The installation of private sewage disposal systems is inspected by the staff of the Simcoe County Health Unit, but inspections with respect to plumbing have not commenced to date.

DRAINAGE

Drainage for the Township of Tosorontio is provided by the Mad, Pine, and Boyne Rivers. All of these are tributaries of the Nottawasaga River.

R.C.A.F. FIRE TRAINING SCHOOL

The Royal Canadian Air Force operates a fire training school at the south-west section of the station area in the Township of Tosorontio.

The main operations at the school consist of the following:

1. Spill Area

In the north section of the training grounds, an old aircraft fuselage has been placed over a concrete pad. To simulate such a fire, fuel is placed on the pad and when ignited the flames envelope the fuselage. This operation is termed as the "spill-area". The fires are extinguished by means of water and foam spray chemicals.

2. Burning Pits

Immediately south of the spill area, there are four small concrete burning pits approximately 1 foot in depth also used for fire fighting purposes. Fires started in these pits are extinguished by manually operated equipment and by automatic spraying mechanisms.

3. Training Tower House

The training tower house consists of a multi-storey concrete building where structural fires are staged by using dry materials ignited with diesel fuel or "Varsol".

4. Sprinkler Building

Various automatic sprinkler systems are used in this building on an experimental basis.

Disposal of Wastes

Drainage from the "spill area", four "burning pits", and the structural tower enters an interconnected sewer system that discharges into a seepage pit. The pit is located approximately 250 feet from a watercourse. The latter is tributary to the Pine River which joins the Nottawasaga River north-east of the Police Village of Angus.

Comments

There was no evidence of wastes escaping from the seepage pit which had considerable reserve capacity at the time of the examination.

REFUSE DISPOSAL

No garbage collection service is provided by the township, but two municipal sites are available for the disposal of refuse, and these are described as follows:

1. Tioga Site

This site is situated in Lot 18, on the east side of the road allowance between Concessions 3 & 4, immediately north of the settlement of Tioga.

It is open to township residents on Thursdays from 12:00 noon to 9 p.m. The trench and burn method is employed here.

Comments

There was no evidence of any seepage or drainage from this site which is surrounded by sandy soil.

2. Rosemount Site

A second municipal dump is situated in Lot 6 on the west side of the road allowance between Concessions 1 & 2, approximately 2.5 miles north-east of the community of Rosemount.

Dumping here is permitted on Tuesdays from 12:00 noon to 9 p.m. The trench and burn method is also employed at this site.

Comments

While there was no evidence of liquid wastes draining from this disposal site at the time of the examination, drainage from the immediate area is naturally tributary via a gully to a branch of the Boyne River.

INDUSTRY

With the exception of farming, industrial activities in the township are minimal. The only waste-producing industry is described as follows:

McCarroll's Slaughter-House

Mr.E.J.McCarroll of Alliston operates a slaughter-house which is located in Lot 1 at the south-east corner of Tosorontio in close proximity to the Town of Alliston.

This plant is engaged in custom killing and cutting. Animals are also slaughtered here for sale in the owner's meat shop in Alliston.

Animals are normally killed on Mondays.

Disposal of Wastes

The liquid wastes are discharged to the ground surface via a catch basin.

Comments

While the method of waste disposal employed here is improvised, there was no evidence of the wastes reaching a watercourse at the time of inspection.

FISH KILL IN BOYNE RIVER

In July 1963, a number of dead fish were found in the Boyne River downstream from the road allowance between Concession 6 & 7 in the Township of Tosorontio.

At the time, water was being pumped from the river by a local farmer, mixed with a fungicide and D.D.T. along the river bank, and then sprayed on potato crops. One of the water intake points was in the township immediately upstream from the Earl Rowe Provincial Park.

The investigation made by the Commission revealed that a toxic agent, probably D.D.T., had entered the river and this evidently caused the fish kill.

Comments

In future, if spray tanks are to be filled in this manner using a toxic agent, greater precaution will have to be taken to avoid a poisonous substance or solution from entering the water.

ANALYSES OF SAMPLES

The laboratory results of bacteriological examinations and chemical analyses of samples collected from the watercourses providing drainage for the Township of Tosorontio are included in Table I which is appended to this report.

All of the examinations and analyses were performed at the Ontario Water Resources Commission laboratory in Toronto.

A plan of the township showing the approximate location of the sampling points and other pertinent information is enclosed at the back of this report.

1. Significance of Laboratory Results

The OWRC objectives for surface waters in Ontario are as follows:

5-day Biochemical Oxygen Demand (BOD)	
not greater than	4 ppm
Membrane Filter (MF) Coliform Count	
not greater than	2,400 coliforms per 100 ml

Comments

The laboratory results included in Table I representing the tests performed on the samples collected in the Township of Tosorontio revealed that the watercourses were satisfactory from a bacteriological and chemical viewpoint.

SUMMARY

A survey to locate and record any existing or potential sources of water pollution in the Township of Tosorontio was made in March 1964.

This survey did not reveal any significant sources of pollution insofar as the township is concerned. However, a serious water pollution problem could recur if a toxic agent entered a watercourse when the spray tanks are filled in the manner previously described.

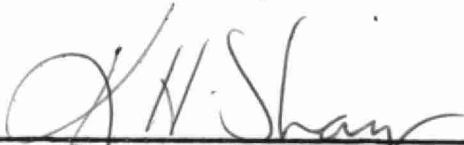
The Commission plans further inspections during the potato growing season to ensure that proper precautions are taken in connection with the handling of chemicals in close proximity to a watercourse.

All of which is respectfully submitted,

District Engineer: _____


H. Browne

Approved by: _____


K.H. Sharpe, Director

Prepared by:

P.J. Walsh.

ds

All analyses except
pH reported in ppm
unless otherwise
indicated

ONTARIO WATER RESOURCES COMMISSION

LABORATORIES

TABLE 1-1 TWP. OF TOSORONTO

Sampling Point No.	Location & Description	Date Examined or Sampled	5-Day BOD	SOLIDS			Turb- idity	M.F. Coliform Count per 100 ml
				Total	Susp.	Diss.		
<u>MAD RIVER</u>								
NM-38.6	Mad R. @ Road allow between Conc. 2 & 3 0.7 miles east of Glencairn	July 12/61	0.7	260	-	-	3.0	1870
		Oct. 16/62	0.8	302	-	-	6.5	164
		May 22/63	1.9	322	-	-	2.5	460
<u>PINE RIVER</u>								
NPL-38.8	Pine River tributary- (Lisle Br.) 0.5 miles east of Lisle	July 12/61	0.9	236	-	-	1.0	2200
		Oct. 16/62	1.4	466	-	-	3.3	86
		May 22/63	1.9	278	-	-	1.1	260

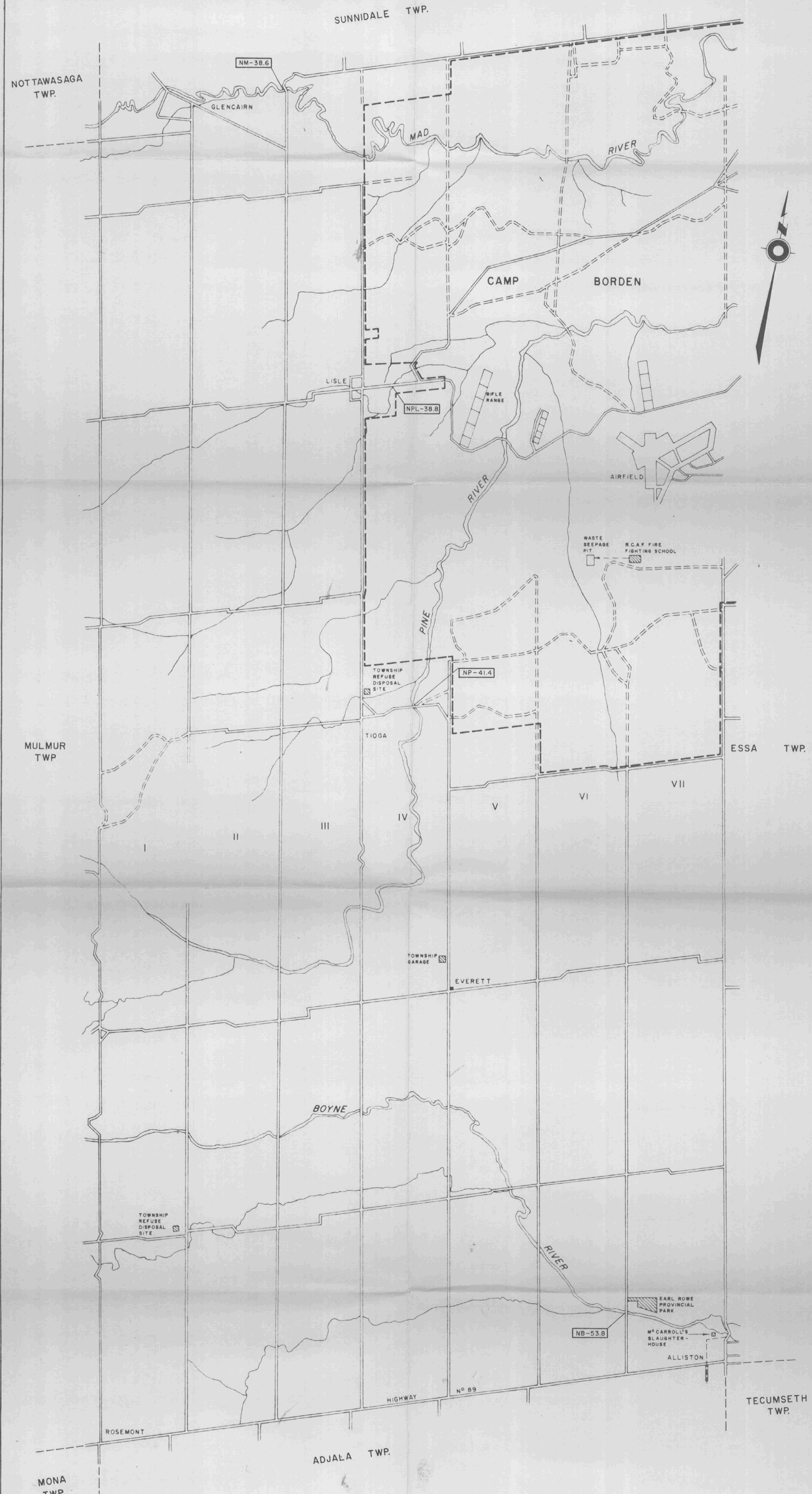
All analyses except
pH reported in ppm
unless otherwise
indicated

ONTARIO WATER RESOURCES COMMISSION

LABORATORIES

TABLE 1-2

Sampling Point No.	Location & Description	Date Examined or Sampled	5-Day BOD	SOLIDS			Turb- idity	M.F. Coliform Count per 100 ml
				Total	Susp.	Diss.		
NP-41.4	Pine River @ Sideroad East of Tioga	July 12/61	0.7	264	-	-	4.0	40
		Oct. 16/62	2.0	304	-	-	9.5	36
		May 22/63	2.1	306	-	-	13.0	300
BOYNE RIVER								
NB-53.8	Boyne R. @ Road allow between Conc. 6&7	July 12/61	1.1	268	-	-	3.0	160
		May 15/62	1.1	256	-	-	2.3	300
		Oct. 16/62	1.9	308	-	-	2.0	126
		May 22/63	2.6	294	-	-	2.6	190



LEGEND
NB-53.8 SAMPLING POINT SHOWING STREAM AND MILEAGE

ONTARIO WATER RESOURCES COMMISSION	
TWP. OF TOSORONTIO	
WATER POLLUTION SURVEY	
SCALE: 1/2 1/4 0 MILES	
DRAWN BY: A.R.S.	DATE: JUNE, 1964
CHECKED BY:	DRAWING NO: 64-37

LABORATORY LIBRARY



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